

Work Order ID 61006

Page 1

August 4, 2010 8:55:04 AM

Item ID: D4148-1

Accept



Setup Start



Revision ID:

Stop



Item Name: Crosstube Lug Plate, Fwd

Start Date: 8/04/10 Start Qty: 10.00



Cust Item ID:

Required Date: 8/11/10 Req'd Qty: 10.00



Customer:

Reference:

Approvals: Process Plan:



Date: 10-8-04

Tooling:

Date:



QC:

Date:

SPC (Y/N):

Date:



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

Draw Nbr	Revision Nbr								
----------	--------------	--	--	--	--	--	--	--	--

D4148	B								
-------	---	--	--	--	--	--	--	--	--

100		0.00							
-----	--	------	--	--	--	--	--	--	--

--	--	--	--	--	--	--	--	--	--

Waterjet	Memo	0.00							
----------	------	------	--	--	--	--	--	--	--

FLOW CNC Waterjet	Cut as per dwg D4148								
-------------------	----------------------	--	--	--	--	--	--	--	--

304 108
Prog Rev: 108
Dwg Rev: 108

Deburr as required

110	QC2- Inspect parts off machine FAI/FAIB	0.00							
-----	---	------	--	--	--	--	--	--	--

--	--	--	--	--	--	--	--	--	--

QC	Memo	0.00							
----	------	------	--	--	--	--	--	--	--

Quality Control									
-----------------	--	--	--	--	--	--	--	--	--

108-9



10-8-9



W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 61006

Page 2

August 4, 2010 8:55:04 AM

Item ID: D4148-1

Accept



Setup

Start



Revision ID:

Item Name: Crosstube Lug Plate, Fwd

Stop



Start Date: 8/04/10 Start Qty: 10.00



Cust Item ID:

Required Date: 8/11/10 Req'd Qty: 10.00



Customer:

Reference:

Approvals: Process Plan:

Date:

Tooling:

Date:

Run

Start



QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/
Work Center ID

120



QC

Quality Control

Operation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

QC8- Inspect parts - second check

0.00

S. V. L. S.

150



Packaging

Packaging

Identify as per dwg & Stock Location: 120

0.00

Memo

0.00

160



QC

Quality Control

QC21- Final Inspection - Work Order Release

0.00

Memo

0.00

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Page 1

August 4, 2010 8:55:13 AM

Work Order ID: 61006



Parent Item: D4148-1



Parent Item Name: Crosstube Lug Plate, Fwd

Start Date: 8/04/10

Required Date: 8/11/10

Start Qty: 10.00

Required Qty: 10.00

Comments: IPP Rev:A 10.06.24 new issue DD verf:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M304S11GA		Purchased	No			100	sf	91.2982	0.3607	3.796842			

304/316 0.125 Sheet



Location	Loc Qty	Loc Code
MAT	91.2982	
114488	1.5259	
114799	89.7723	114799

B 10-8-9

16

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART AEROSPACE LTD	Work Order:	61051
Description: CROSS TUBE LUG PLATE END	Part Number:	4148-1
Inspection Dwg: D4148-1 Rev: B		Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

First Article Prototype

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
Ø .179	+ .005 - .001	.131			✓ HB02	
Ø .257	+ .006 - .001	.254			✓	
Ø .191	+ .005 - .001	.193			✓	
Ø .38	+ .006 - .001	.379			✓	
.247	TL .30	.2463			✓	
.82	TL .30	.821			✓	
3.57	TL .030	3.573			✓	
1.73	TL .030	1.732			✓	
.90	TL .030	.902			✓	
.310 .310	TL .010	.313			✓	
.750	TL .010	.752			✓	
1.98	TL .030	1.981			✓	
1.84	TL .030	1.836			✓	
.92	TL .030	.917			✓	
.375	TL .010	.377			✓	
4.730	TL .010	4.732			✓	
5.30	TL .030	5.301			✓	
1.10	TL .030	1.107			✓	
2.284	TL .010	2.283			✓	
.625	TL .010	.629			✓	
1.000	TL .010	1.002			✓	
.506	TL .010	.501			✓	
.750	TL .010	.754			✓	

Measured by:	IR
Date:	10-8-9

Audited by:	S
Date:	10/08/09

Prototype Approval:	N/A
Date:	N/A

Rev	Date	Change	Revised by	Approved
A		New Issue	KJ/JLM	

DART AEROSPACE LTD	Work Order:	Glen
Description: CROSS TUBE LUG PLATE FWD	Part Number:	D4148-1
Inspection Dwg: D4148-1 Rev: B	Page 1 of 1	

FIRST ARTICLE INSPECTION CHECKLIST

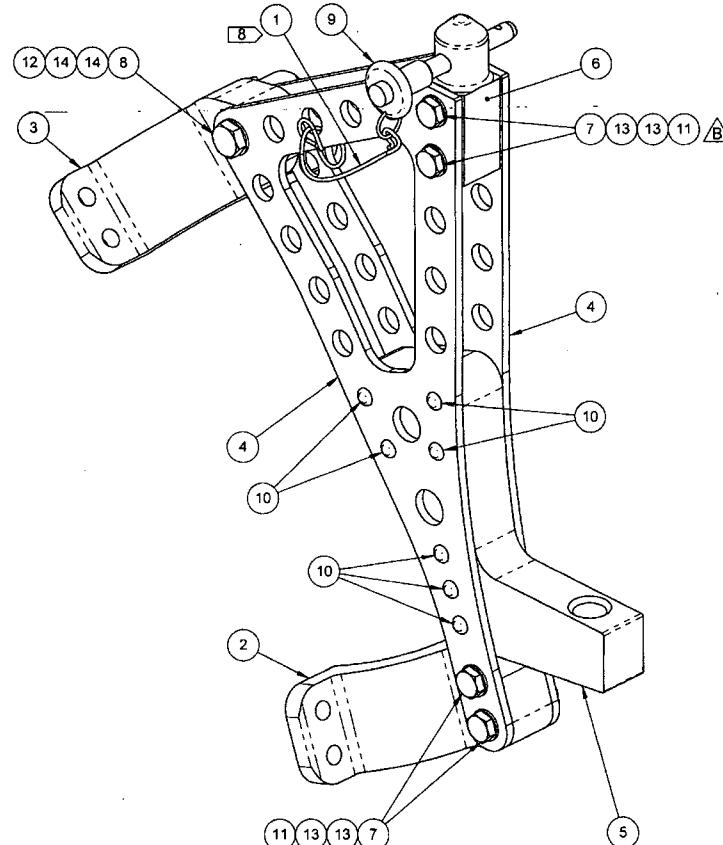
x First Article **Prototype**

Measured by:	JB
Date:	10-9-8

Audited by:	8
Date:	16/08/07

Prototype Approval:	N/A
Date:	N/A

Rev	Date	Change	Revised by	Approved
A		New Issue	KJ/JLM	



D4148-041 FWD X-TUBE LUG ASSY

NOTES:
1) MATERIAL: N/A
2) FINISH: NONE
3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
4) UNITS: INCHES UNLESS OTHERWISE NOTED
5) BREAK SHARP EDGES: N/A
6) IDENTIFICATION: IDENTIFY WITH DART P/N "D4148-041" USING FINE POINT PERMANENT INK MARKER
7) WEIGHT: 3.47 lbs
8) ATTACH D2690-6 TO D4148-1 BY LOOPING AROUND A LIGHTENING HOLE FIRST AND THEN SECURE TO MS17984-C413

ITEM	QTY	P/N	DESCRIPTION
	1	D4148-041	FWD X-TUBE LUG ASSY
1	1	D2690-6	LANYARD
2	1	D3910-1	X-TUBE LUG
3	1	D4091-1	MOUNTING LUG
4	2	D4148-1	FWD X-TUBE LUG PLATE
5	1	D4148-3	STUD RECEIVER LOWER
6	1	D4148-5	EYEBOLT STUD
7	4	AN3C12A	
8	1	AN4C13A	BOLT
9	1	MS17984-C413	PIP PIN
10	7	MS20615-4M18	RIVET
11	4	MS21043-3	NUT
12	1	MS21043-4	NUT
13	8	NAS1149C0332R	WASHER
14	2	NAS1149C0432R	WASHER

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 61004

~~1004~~
PF10-8-4

RELEASED
2010-07-16
m

REPLACED QTY(3) MS20615-4M18 WITH QTY(2) EACH AN3C12A, MS21043-3 AND QTY(4) NAS119C0332R WASHER (ZN D3-1, B7-2 & B4-2), MS20615-4M18 WAS NOT COMPATIBLE (ZN A7-3, B7-2). 0.0191 2PL REPLACES 0.0129 3 PL (ZN D6-3). 0.0129 7 PL WAS 10 PL (ZN A7-3); 0.0191 WAS 0.129 (ZN CR-8). REASON: SEE TR-DR350-607-2 REV. B.		MB	10.07.05
A	NEW ISSUE	MB	10.06.18
REV.	DESCRIPTION	BY	DATE
DESIGN	<u>1A</u>	DART AEROSPACE LTD	
DRAWN	<u>1A</u>	HAWKESBURY, ONTARIO, CANADA	
CHECKED	<u>9/9</u>	DRAWING NO.	REV. B
MFG. APPR.	<u>9/9</u>	D4148	SHEET 1 OF 5
APPROVED	<u>9/9</u>	TITLE	SCALE
DE APPR.	<u>9/9</u>	FWD X-TUBE LUG ASSY	
DATE	10.07.05	COPYRIGHT © 2010 BY DART AEROSPACE LTD THIS DOCUMENT CONTAINS TRADE SECRET INFORMATION WHICH IS NOT TO BE USED FOR ANY PURPOSES OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT	

COPYRIGHT © 2010 BY DART AEROSPACE LTD.
THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS
NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT

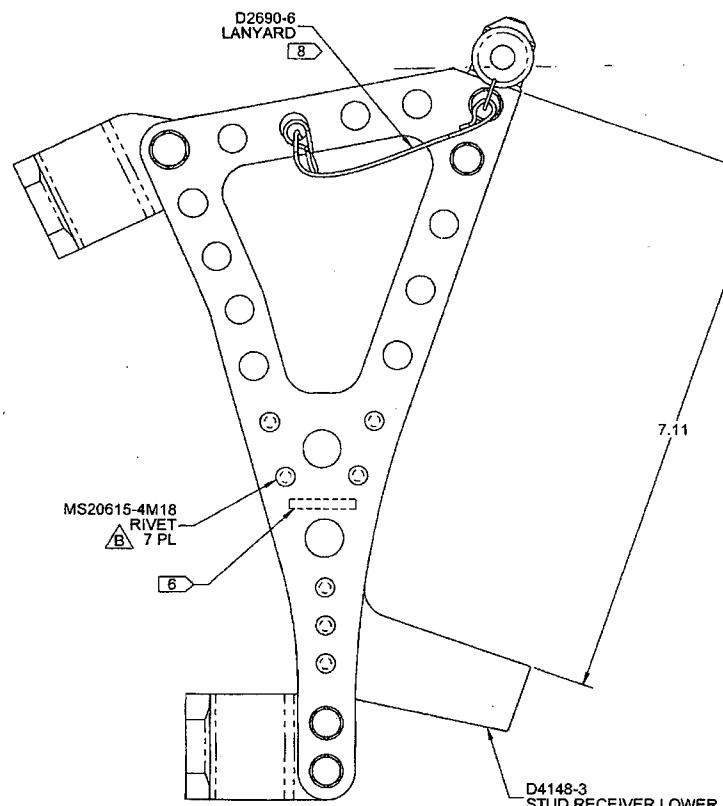
W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE		By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

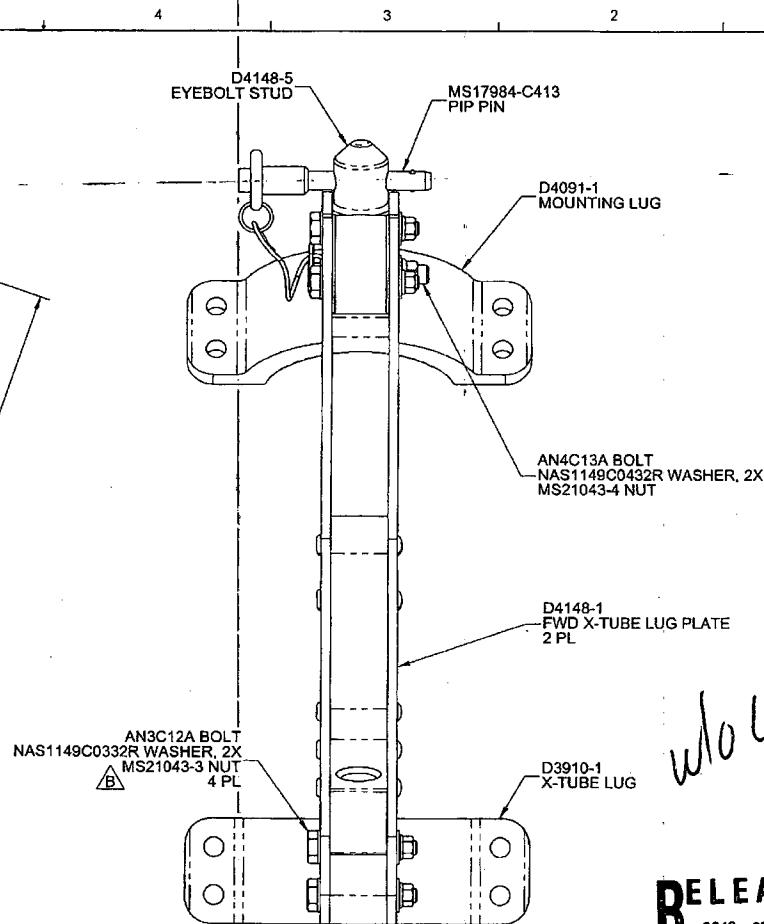
Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



D4148-041 FWD X-TUBE LUG ASSY



RELEASED
2010-07-16
MP

DESIGN		DART AEROSPACE LTD
DRAWN		HAWKESBURY, ONTARIO, CANADA
CHECKED		REV. B
MFG. APPR.		D4148
APPROVED		SHEET 2 OF 5
DE APPR.		TITLE
DATE	10.07.05	SCALE
		NTS

COPYRIGHT © 2010 BY DART AEROSPACE LTD
THIS DOCUMENT IS PROPRIETARY AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS
NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT
WRITTEN PERMISSION FROM DART AEROSPACE LTD.

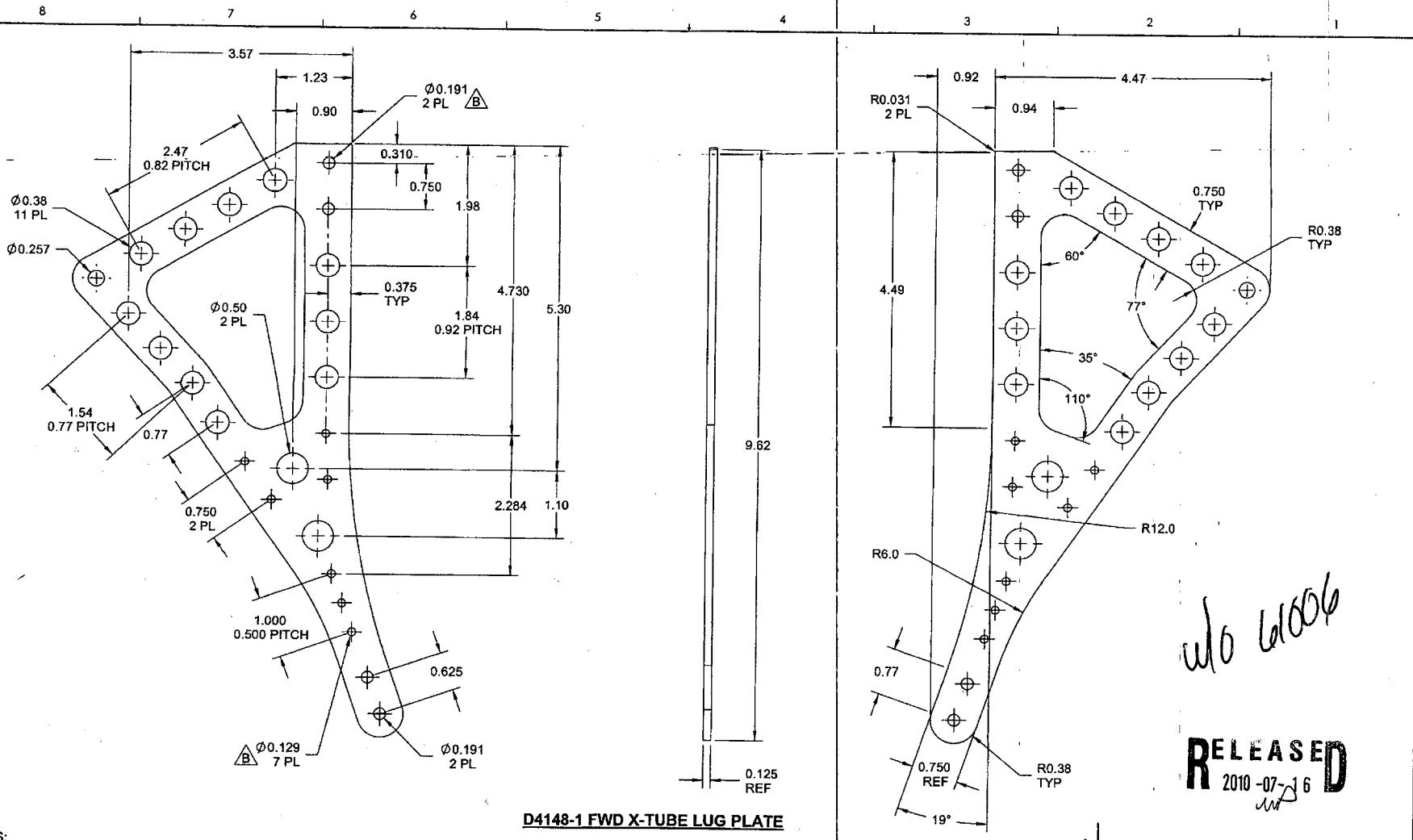
W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE		By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



D4148-1 FWD X-TUBE LUG PLATE

NOTES:

- 1) MATERIAL: 303/304/316 STAINLESS STEEL 0.125" SHEET ANNEALED 2B FINISH, PER MIL-S-5059 OR AMS 5513/5524 OR ASTM A240 OR ASME SA240 REF DART SPEC MS304S11GA OR MS303S11GA
- 2) FINISH: NONE
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK ALL SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: 0.48 lbs

DESIGN		DART AEROSPACE LTD
DRAWN		HAWKESBURY, ONTARIO, CANADA
CHECKED		DRAWING NO.
MFG. APPR.		D4148
APPROVED		REV. B
DE APPR.		SHEET 3 OF 5
DATE	10.07.05	SCALE
		NTS

FWD X-TUBE LUG ASSY

COPYRIGHT © 2010 BY DART AEROSPACE LTD
THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS
NOT TO BE USED, COPIED, OR DISCLOSED IN WHOLE OR IN PART, OR FOR ANY OTHER PERSON WITHOUT
WRITTEN PERMISSION FROM DART AEROSPACE LTD.

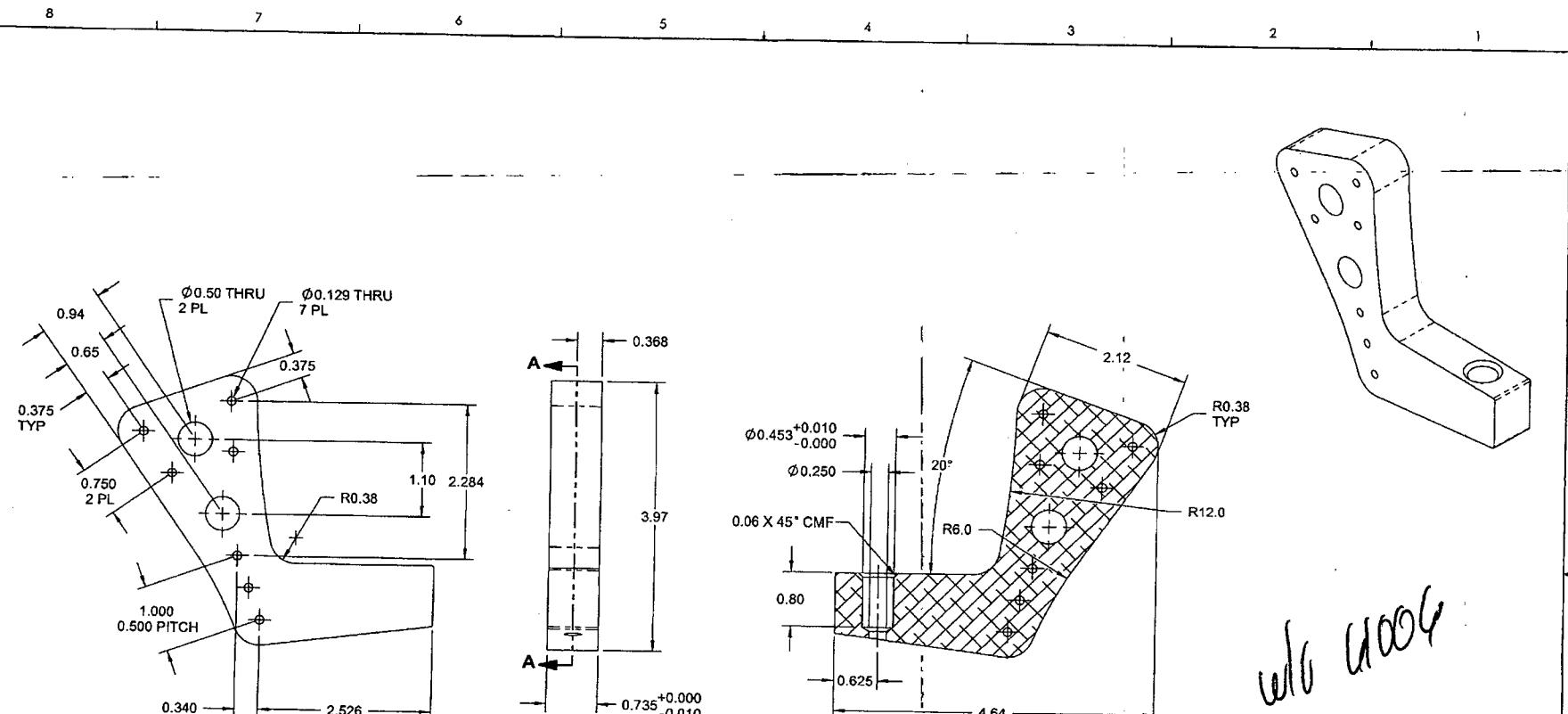
RELEASED
2010-07-16

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE		By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA _____ Date: _____
 Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



D4148-3 STUD RECEIVER LOWER

RELEASED
2010-07-16
MP

NOTES:

- 1) MATERIAL: 303/304/316 STAINLESS STEEL BAR PER ASTM A582 OR ASTM A276
REF DART SPEC MS304B OR MS303B
- 2) FINISH: NONE
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK ALL SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: 1.44 lbs

DESIGN		DART AEROSPACE LTD
DRAWN		HAWKESBURY, ONTARIO, CANADA
CHECKED		DRAWING NO. D4148
MFG. APPR.		REV. B
APPROVED		SHEET 4 OF 5
DE APPR.		TITLE FWD X-TUBE LUG ASSY
DATE	10.07.05	SCALE NTS

COPYRIGHT © 2010 BY DART AEROSPACE LTD
THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS
NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT
WRITTEN PERMISSION FROM DART AEROSPACE LTD

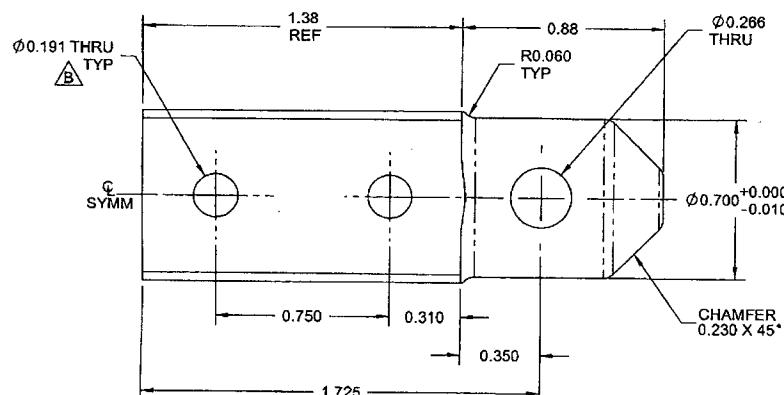
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

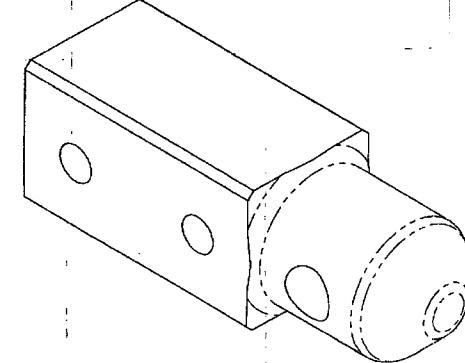
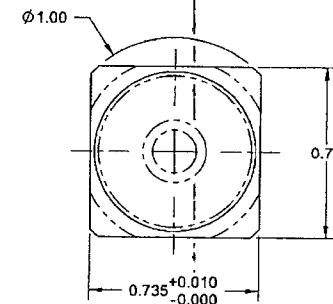
Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



D4148-5 EYEBOLT STUD



W6 U1604.

RELEASED
2010-07-16
M

NOTES:

- 1) MATERIAL: 303/304/316 STAINLESS STEEL BAR PER ASTM A582 OR ASTM A276
REF DART SPEC MS304B OR MS303B
- 2) FINISH: NONE
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK ALL SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: 0.28 lbs

DESIGN	<i>[Signature]</i>	DART AEROSPACE LTD
DRAWN	<i>[Signature]</i>	HAWKESBURY, ONTARIO, CANADA
CHECKED	<i>[Signature]</i>	DRAWING NO.
MFG. APPR.	<i>[Signature]</i>	REV. B
APPROVED	<i>[Signature]</i>	SHEET 5 OF 5
DE APPR.	<i>[Signature]</i>	TITLE
DATE	10.07.05	SCALE
		NTS

Copyright © 2010 by DART Aerospace Ltd.
This document is the property of DART Aerospace Ltd. and is loaned to the customer. It is
not to be used for any purpose or copied or communicated to any other person without
written permission from DART Aerospace Ltd.

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries